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SUGAR REPORTS

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MARKET REVIEW

Stability was the outstanding feature of the domestic raw sugar market during most of 1953. In recent months, three factors have left their impression: the threat of a longshoreman's strike in Atlantic ports; the very large marketings of new-crop beet sugar before the end of 1953; and the unusually wide spread between refined sugar prices in the East, on the one hand, and the Midwest and South on the other.

The strike was first called for October. In anticipation of it, the sugar trade and industrial sugar users bought sugar to build up their inventories. Thus, refiners stepped up their raw sugar receipts and their refined sugar deliveries in September. When the strike was stayed until December 24, 1953, by a court injunction, sugar users again reacted with strong demand in November and December. Refiners delivered 933,000 tons of sugar, raw value, during these two months, about 17 percent more than the approximately 800,000 tons delivered during those months, in either 1951 or 1952.

From January 1 to the end of October, sugar beet processors had marketed only about 1,364,000 tons of sugar, raw value. A survey of processors' marketing intentions indicated that they would not market more sugar in November and December than their previous record for those months. Thus, the Secretary of Agriculture determined on November 6 that the domestic beet sugar area would be unable to market 180,000 tons of its total 1,800,000 ton quota. This was a deficit of 80,000 tons in addition to the deficit previously determined in August. Beet processors, however, distributed 388,000 tons of sugar in November and December, one and one-half times as much as their average deliveries during those months in the preceding five years and 122,000 tons more than their maximum deliveries in any of those five years. This acceleration reflected in part their efforts to market as much as possible, of their new-crop sugar before they would be subject to marketing allotments in 1954.

The beet area deficit was reallocated among the other domestic areas and Cuba. About 64,000 tons of the 80,000 ton deficit were reallocated to areas supplying the eastern United States. As a result of this, sellers apparently became apprehensive and the spot price of raw sugar, c.i.f. New York, dropped 29 points during the week following the deficit declaration and reallocation. This happened in spite of the fact that available quota balances for the areas supplying eastern and southern refiners were about 200,000 tons less than quotas charged against those areas in November and December 1952, even after consideration of the deficit reallocation.

Price weakness in the domestic market started earlier when Gulf refiners reportedly began selling at prices below their published quotations late in August. In September they reduced their quoted price to 8.60 cents. At the end of October they were reportedly selling at 8.30 cents, 55 points below the New York price. This was followed by a sharp decline in the price of beet sugar in the Chicago-West territory. By the middle of November, the New York price had declined from 8.85 cents, where it had held since July, to 8.65 cents. At that time, the quoted prices for cane and beet sugar in the Chicago-West territory were only 8.40 and 8.10 cents, respectively. Actual prices for beet sugar in that region fell to 7.90 cents and perhaps even to 7.80 cents.

On February 1 and 2, 1954, the New Orleans refiners announced an increase to 8.50 cents and some beet processors to 8.30 cents, effective February 4 but with the sellers taking business for 30-day future delivery at the old prices. This is the first indication of a narrowing in the unusually wide spread between the refined sugar price in New York and the prices in the southern and Chicago West territories. This situation has been analyzed elsewhere in this issue.

The refiners' margin, that is, the difference between the wholesale price of refined cane sugar in New York and the spot price of raw sugar, duty paid, in New York widened to 2.60 and 2.61 cents per pound in December 1953 and January 1954 respectively. This was close to the all-time high of 2.65 cents in December 1952.

The spot price of raw sugar, duty paid, in New York declined from the level of approximately 6.40 cents per pound, which had been maintained since March, to 6.03 cents during the first half of November. From November 23 to December 8, spot raws, duty paid, ranged between 6.12 and 6.32 cents, but settled to around 6.00 cents thereafter. This meant that spot raws c.i.f. were around 5.50 cents and have thus fallen to the approximate level at which March 1954 futures have sold since trading opened in that position.

The spot price of world raws, f.a.s. Cuba in 1953 was consistently below its 1952 level; it averaged 4.17 cents in 1952 but only 3.41 cents in 1953. This price series swung from 3.65 cents early in February 1953 down to 3.12 cents early in April and up again to the high point of the year, 3.77 cents in May and down to the low point of 3.05 cents early in November. These swings over a 72 point range in the price of world raws compare with a range of 45 points in the price of domestic spot raws, New York. The comparative stability of the domestic price series is even more significant if the swings are measured in terms of percentages of the annual average. The world price series varied over a range of 21 percent of the annual average; the domestic price series varied only over an 8 percent range. Moreover, between March 10 and November 6, 1953, domestic prices ranged only from 5.80 to 5.95 cents (exclusive of duty).

The quota premium was much larger throughout the year 1953 than it had been in 1952. It was 1.88 cents in December after the price of world raws had recovered to approximately 3.25 cents from a low of 3.05 cents early in November. World raws climbed to a level of approximately 3.40 cents early in February 1954 and the quota premium fell to 1.72 cents.

In December 1952, the Secretary of Agriculture had established sugar requirements at 7,800,000 tons. However, as the year passed by and sugar was in strong demand, the requirements estimate was increased by steps of 100,000 tons in April, July and October to a final amount of 8,100,000 tons. As previously indicated, Domestic Beet Sugar Area deficits of 100,000 tons and 80,000 tons, respectively, were declared in August and November. A Philippine deficit of 100,000 tons was declared in September. Total quota charges in 1953 amounted to approximately 8,287,000 tons ^{1/} about 187,000 tons in excess of the revised requirements estimate, since the Domestic Beet Sugar Area and the Philippines filled that much of their 280,000 ton deficits. Under the provisions of the Act, an area may always market sugar up to its full quota, even after a deficit has been declared.

^{1/} This excludes about 11,000 tons of sugar for which credits for drawback of duty were granted.

Although 1953 quota charges exceeded 1952 quota charges by more than 300,000 tons, imports from Cuba declined about 220,000 tons. This may seem surprising in view of the fact that Cuba is our residual sugar supplier and, as a general proposition, tends to furnish increases in our sugar requirements. The reasons for the unusual situation in 1953 are changes in the Sugar Act and the reduced need for deficit reallocations.

The amendments to the Sugar Act which were adopted in 1951 became effective with the beginning of 1953, including a 170,000 ton increase, in the quota for Puerto Rico and smaller increases in the quotas for the full-duty countries and the Virgin Islands. Ninety-six percent of any Philippine deficits are allotted to Cuba; but the Philippine deficit of only 100,000 tons in 1953 compares with a 200,000 ton deficit declared in 1952. Finally, a smaller Beet Sugar Area deficit reallocation in 1953 as compared with 1952 and the absence of any Hawaiian deficit in 1953 tended to decrease the magnitude of the final adjusted quota for Cuba.

Sugar distribution in 1953 amounted to approximately 8,482,000 tons, raw value, about 378,000 tons more than in 1952 and 195,000 tons more than quota charges,^{2/} as indicated by preliminary figures. Refiners' stocks of quota sugar were reduced. To maintain orderly marketing, the Secretary's action of December 2 permitted the receipt and refining of offshore raw sugar under bond during December. Such sugar had to be held in stock until the beginning of the new year and was charged to 1954 quotas. As a further aid to orderly marketing, the Secretary's action of December 18 permitted the shipment of refined sugar under bond to consignment locations. The emergency created by the strike threat made the bonding device a more appropriate measure than a "last-minute" increase in the requirements estimate and quotas of the old year. Mainland raw cane sugar also was delivered to refineries and held under bond in inventory for charge to 1954 quotas.

On December 14, 1953, the Secretary estimated 1954 mainland sugar consumption at 8,400,000 tons, raw value. As a price stabilization measure and in view of the accumulation of sugar users' inventories in November and December the Secretary set 1954 requirements at 8,000,000 tons. Primary distribution figures so far in 1954 are smaller than for the comparable period in 1953, a reflection of the preceding building up of users' inventories.

^{2/} Quota charges are made when cane sugar is received from offshore areas by a refiner or other importer, or when it is sold to a refiner (or for direct consumption) by a mainland cane mill. Thus refiners' distribution figures differ from their quota charges. In the case of beet sugar, however, quotas are charged when the sugar is marketed so that for such sugar quota charges and primary distribution figures are identical.

SUGAR SUPPLIES AND REQUIREMENTS, WEST AND EAST
OF THE MISSISSIPPI RIVER

Customarily the basis price of refined sugar at wholesale in the Chicago-West territory is not more than 10 points under the New York price. However, in 1953, although the quoted wholesale price of cane sugar at New York was 8.85 cents per pound from July 20 until November 2, Gulf refiners lowered their quoted price to 8.60 cents in September. By late October these refiners were reportedly selling at 8.30 cents, 55 points below the New York price. By the middle of November, when the New York price had declined to 8.65 cents, the basis prices for cane and beet sugar in the Chicago-West territory were only 8.40 and 8.10 cents, respectively. Actual prices for beet sugar in that area fell as low as 7.90 cents and may even have fallen to 7.80 cents per pound. Sugar was sold at these prices for delivery into the spring months. On February 1 and 2, 1954, the New Orleans refiners announced an increase to 8.50 cents and western beet processors to 8.30 cents in this territory, effective February 4. However, the significance of these increases cannot be gauged since additional sales were made at the old prices and deliveries are still being made at the old prices.

The answer to the spread between the New York and Chicago-West prices lies in the surplus of domestic sugar supplies over requirements in the western part of the country. Roughly, the United States can be divided into a surplus sugar producing area west of the Mississippi River and a deficit area east of that river. The year 1953 was the first postwar year in which all of the domestic areas produced crops equal to or above their marketing quotas.

This will be the largest crop on record in the mainland cane area and the third largest in the beet area. With the exception of approximately 270,000 tons produced in Florida and the eastern beet states all of this beet and mainland cane sugar is produced west of the Mississippi River. Considerable quantities of western beet and Louisiana cane sugar must find markets east of the Mississippi River.

All of the Hawaiian sugar is, of course, produced west of the Mississippi River and most of it is refined in the California and Hawaiian refinery at Crockett, California. Some of the Hawaiian sugar is shipped overland in refined form into the eastern deficit area and some is shipped in raw form from Hawaii direct to east coast refineries. In the following table the entire Hawaiian quota for the mainland is treated as part of the domestic supply produced west of the Mississippi River.

Essentially all of the Puerto Rican sugar comes into the eastern deficit area. In this analysis all of the Philippine sugar is counted as coming into east coast ports, although about 1,200 tons were received in refined form on the west coast in 1953 and approximately 2,000 tons of raw sugar were entered at west coast ports for refining. For the future it is reasonable to assume that the Philippine industry will undertake to enter against its quota the 60,000 short tons, raw value, of direct-consumption sugar provided for by the Sugar Act. It is probable that essentially all of this Philippine direct-consumption sugar will be entered on the west coast as it has been in the past.

In the accompanying table all Cuban and full duty sugar is considered as being marketed east of the Mississippi River. However, a substantial part of the Cuban raw sugar is refined in Louisiana and Texas. To the extent that such sugar is marketed west of the Mississippi River additional sugar produced in the west must find an outlet in the east.

Table 1 shows the portion of continental United States sugar requirements which is produced in the domestic areas west of the Mississippi River and domestic and foreign supplies in the east. The data used in this table are based on final basic quotas for 1953. Supplies in the beet and mainland cane areas were divided between the western and eastern regions as follows: Beet area, statutory quota prorated on basis of production of sugar from 1953 crop by western and eastern processors; Mainland cane area, preliminary 1954 allotments to Louisiana and Florida processors.

TABLE 1. SUGAR SUPPLIES, WEST AND EAST OF THE MISSISSIPPI RIVER

<u>Area</u>	<u>1,000 short tons, raw value</u>	
	<u>West of Miss. River</u>	<u>East of Miss. River</u>
Hawaii	1,052	-
Beet area	1,683	117
Mainland cane area	409	91
Puerto Rico	-	1,080
Virgin Islands	-	12
Total domestic	<u>3,144</u>	<u>1,300</u>
Philippines	-	974
Cuba	-	2,575
Other foreign countries	-	<u>107</u>
Total	<u>3,144</u>	<u>4,956</u>

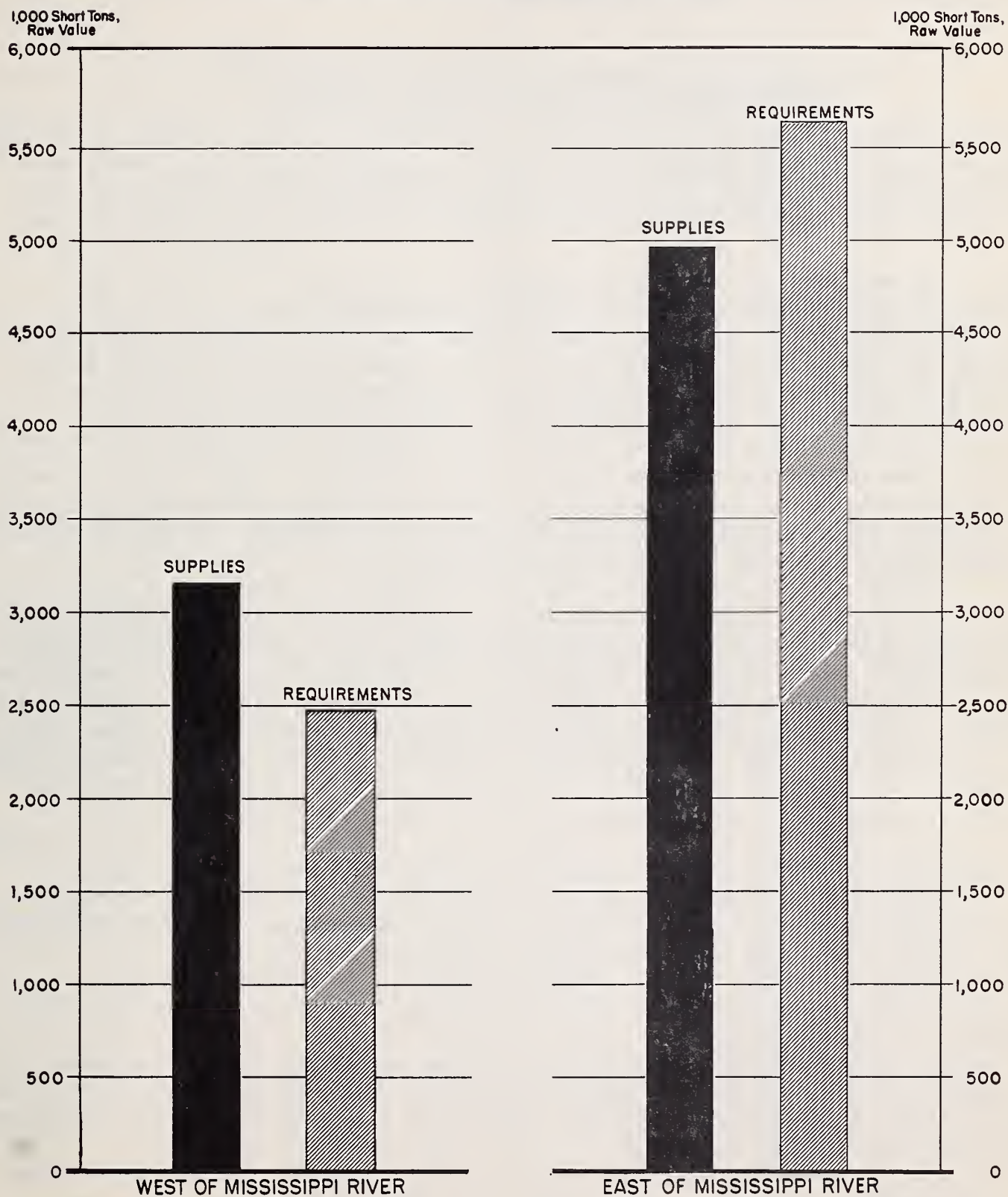
Table 2 shows sugar supplies and requirements west and east of the Mississippi River (See also Figure 1).

TABLE 2. SUGAR SUPPLIES AND REQUIREMENTS, WEST AND EAST
OF THE MISSISSIPPI RIVER

<u>Region</u>	<u>1,000 short tons, raw value</u>		<u>Surplus or deficit in supplies</u>
	<u>Supplies <u>1/</u></u>	<u>Requirements <u>2/</u></u>	
West of Mississippi River	3,144	2,481	✓ 663
East of Mississippi River	4,956	5,606	- 650

1/ See Table 1

2/ Deliveries by states during 1952; data for 1953 not yet available

FIG.1. SUGAR SUPPLIES AND REQUIREMENTS,
WEST AND EAST OF THE MISSISSIPPI RIVER.

The above analysis shows that the area west of the Mississippi River has a surplus of over 600,000 tons of domestically produced sugar that must find a market in the deficit area east of the river. If account is taken of the quantity of sugar attributed in the analysis to the eastern area but actually refined in Texas and Louisiana and of the quantities of sugar refined in the east and shipped to points west of the Mississippi River, it is evident that additional supplies must be shipped from the producing areas in the west to consuming areas in the east.

SUGAR USE IN MANUFACTURED DAIRY PRODUCTS ^{3/}

Recently about 7 percent of the industrial market for sugar has been furnished by manufactured dairy products. The industrial market itself has provided about one-half of the total outlet for sugar, while homes, hotels, and other institutions take the other half of all sugar consumed in the United States.

The use of sweeteners in the dairy industry has increased at a more rapid rate than in manufactured products generally during the past two decades. Frozen desserts are the principal sugar-containing dairy product. Sweetened, unskimmed, condensed milk in cans is the other sugar containing end product of the dairy industry. Its importance has diminished and it now accounts for less than 4 percent of all sugar used in the dairy industry.

^{3/} As used herein the term "Manufactured dairy products" means frozen desserts and sweetened unskimmed condensed milk in cans. Frozen desserts are composed of ice cream, sherbets, water ices, ice milk, and vegetable fat frozen desserts. (For definitions of these products see Footnote 4).

These manufactured dairy products cover all finished products using sweeteners in the dairy industry, except miscellaneous items known as "all other frozen dairy products" which at present use a total of about 3,500 tons of sweeteners annually. Sweetened goods (e.g. sweetened condensed milk in bulk) made in the dairy products industry and used as intermediate materials in other products will be covered when data for such products are analyzed. To the extent they are used as intermediate materials in manufactured dairy products, which is substantial, they are automatically covered by this analysis.

^{4/} As used herein the following definitions apply for frozen desserts:

Ice Cream -- A frozen dessert of relatively high butterfat content. Production data include frozen custards and frosted malted milk with butterfat content equal to or more than the minimum required for ice cream.

Sherbets -- Frozen sherbets made with milk as defined in State standards. Ordinarily sherbet contains less than 3 percent butterfat content and usually added fruit acid.

Water Ices -- Frozen desserts containing no milk solids. Includes specialties (such as popsicles) made with fruit juice or water and artificial flavor. Although not dairy products, water ices are included in this discussion because they are frozen desserts.

Ice Milk -- Frozen products (except frozen custard and frosted malted milk) made with a butterfat content more than sherbet but less than the minimum for ice cream.

Vegetable Fat Frozen Desserts -- Frozen desserts similar to ice cream but containing fats and oils exclusive of butterfat. These are "Mellorine Type" frozen desserts.

The purpose of this analysis is to review the production of these products, to set forth their total use of sweeteners, and to indicate the relationship of sugar costs to total costs. For clarity, frozen desserts and sweetened unskimmed condensed milk in cans will be discussed separately.

Frozen Desserts

Introduction

Commercial production of frozen desserts has tended to increase at the annual rate of about 30 million gallons since 1934 (Table 3 and Figure 2). This has been brought about by growth in population, and by an increase in per capita consumption. The commercial development of a greater variety of products (water ices, ice milks, and vegetable fat frozen desserts) and shifts from home to factory production have contributed to the increase in per capita consumption.

After several years of declining production, total output increased from 195 million gallons in 1934 to 338 million gallons in 1940, an increase of 73 percent in total and of 66 percent on a per capita basis. During that period ice cream averaged nearly 97 percent, and sherbets about 3 percent of the total. World War II brought restrictions on the use of ingredients needed to make frozen desserts. Despite this, there were some increases both in total and in per capita production.

During the war years of 1942-1945, average annual ice cream production amounted to about 450 million gallons, one and one-half times as much as the average annual production during the prewar period 1937 through 1940. Production of sherbets leaped from an annual average of about 8 million gallons during 1940-1942 to 47 million in 1943 and to 65 million in 1945, an all-time peak, when it accounted for almost one-eighth of total frozen dessert output. Sherbets require 1 to 2 percent of butterfat in contrast to 10 to 12 percent of butterfat contained in ice cream. Ice milk, a product containing 4 to 6 percent butterfat was produced at a rather steady annual rate of 12 million gallons from 1940 through 1945.

Removal of wartime restrictions late in 1945 on the use of butterfat was followed by a jump of one-third in total frozen dessert output in 1946, to an all-time high of 741 million gallons. Ice cream production expanded by 238 million gallons, 50 percent. Output of sherbets fell from 65 million gallons in 1945 to 12 million in 1946. The sharp rise in frozen dessert output in 1946 was followed by declines during the next two years to a total of 608 million gallons in 1948, a post-war low. Since 1949 output has increased each year over the year preceding and in 1952 was 16 percent larger than in 1948. The increase has exceeded the increase in population; per capita production in 1952, 4.5 gallons, was 9 percent greater than in 1948. During the post-war period two types of frozen desserts have come into recorded commercial production, water ice in 1949 and vegetable fat frozen desserts in 1952.

Frozen desserts other than ice cream contain little, if any, butterfat. This is their common characteristic; because of it, they are lower-cost products than ice cream. These lower-cost frozen desserts have recently

TABLE 3 - PRODUCTION OF FROZEN DESSERTS AND SWEETENED UNSKIMMED CONDENSED MILK IN CANS

Annually 1934-53

Year	Frozen Desserts				Vegetable fat frozen desserts l/ gallons	Total	Per capita	Sweetened unskimmed condensed milk in cans
	Ice Cream	Sherbets	Water Ices l/ 1,000 gallons	Ice Milk l/ 1,000 pounds				
1934	191,560	3,216			194,776	1.54	60,652	
1935	219,134	3,586			222,720	1.75	52,985	
1936	258,585	5,272			263,857	2.05	47,361	
1937	291,057	5,992			297,049	2.20	47,446	
1938	286,366	6,046			292,412	2.25	41,539	
1939	305,772	13,793			319,565	2.44	34,732	
1940	318,088	8,089		11,878	338,055	2.56	61,955	
1941	390,175	8,060		13,980	412,215	3.10	114,772	
1942	464,146	8,772		14,002	486,920	3.64	62,453	
1943	411,626	47,218		10,041	468,885	3.49	117,247	
1944	444,198	49,481		9,038	502,717	3.72	139,145	
1945	476,357	65,177		12,527	554,061	4.18	143,306	
1946	713,594	12,019		15,471	741,084	5.29	113,906	
1947	630,766	10,447		15,829	657,042	4.58	164,733	
1948	576,261	12,211		19,585	608,057	4.16	126,295	
1949	557,929	13,616	18,695	29,651	619,891	4.17	100,902	
1950	554,351	17,018	18,299	36,870	626,538	4.14	61,973	
1951	568,849	20,469	21,683	45,804	656,805	4.28	58,933	
1952	591,576	25,640	26,661	53,163	708,048	4.53	54,438	
1953	606,550	31,630	3/	3/	3/	3/	43,600 2/	

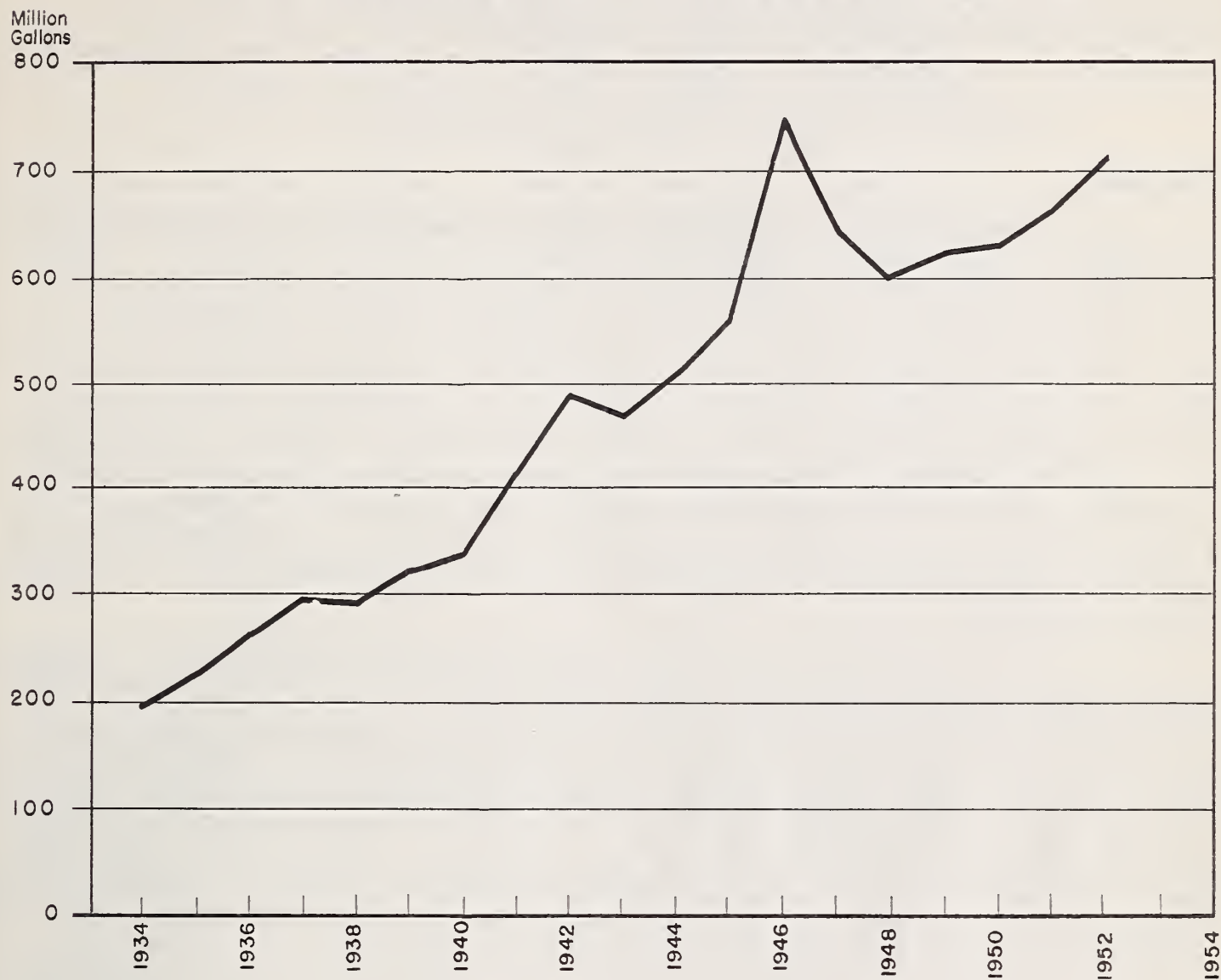
1/ There may have been some production before the first year data became available.

2/ Estimated

3/ Not available

Source: Agricultural Marketing Service (Formerly BAE), U. S. Department of Agriculture

FIG.2. PRODUCTION OF FROZEN DESSERTS



accounted for an expanding proportion of total frozen dessert production, larger even than in 1945. Their relative share of the market rose from 3 percent before the war to 14 percent in 1945; it contracted to only 4 percent during 1946-1948, but climbed to an all-time high of almost 16.5 percent in 1952. In 1952 ice cream held about 83.5 percent of the total commercial market for frozen desserts, sherbets and water ices 3.7 percent each, ice milk 7.5 percent, and vegetable fat frozen desserts 1.6 percent.

Ingredients

Sweeteners, butterfat and nonfat milk solids are the essential ingredients of ice cream. High-value butterfat is partially or wholly replaced in the other frozen desserts by the lower-priced ingredients mentioned above or by vegetable fats, (Tables 4 and 5). To a remarkable degree of constancy, these ingredients together, constitute slightly more than one-third of the weight of different frozen desserts. Ice milk and vegetable fat frozen desserts contain about 15 percent of sweetener, just like ice cream. But sherbets and water ices have about double the sweetener content of ice cream, namely 28 to 30 percent. Sweeteners, it should be noted, cost only about one-eighth as much as butterfat and somewhat less than other solids. Due to the preponderance of ice cream among the frozen desserts, approximately 93 percent of the total output of frozen desserts in 1952 had about 15 percent sweetener content.

With total solids content rather stable and a sweetener content of 30 percent, sherbets have only one-third the nonfat milk solids content of ice cream; in water ices nonfat milk solids are eliminated. Ice milk contains half as much butterfat as ice cream but slightly more nonfat milk solids. Vegetable fat frozen desserts, as the name implies, contain vegetable fats in lieu of the butterfats and the fat content tends to be only two-thirds that of ice cream. Sugar constitutes about 90 percent of the sweeteners used in frozen desserts, although 62 percent of the ice cream and 88 percent of ices and sherbet manufacturers are reported to use some sweeteners derived from corn. Most manufacturers using corn sweeteners prefer a combination of approximately three-quarters of sugar and one-quarter of corn sweeteners, so as to impart certain physical properties and, especially as it concerns sherbets and ices, to avail themselves of any favorable price differential between sugar and corn sweeteners. ^{5/} Thus, a somewhat higher proportion of manufacturers of sherbets and ices than of ice cream prefer combinations in which corn sweeteners are at least 30 percent of the total sweetener content.

Total Use of Sweeteners

Before the war total use of sweeteners and output of frozen desserts changed in about the same proportion; during the war and since 1949, due to the growing importance of sherbets and water ices, increases in total sweetener usage have been larger than the growth in frozen dessert output. From 1936 through 1940, about 113,000 tons of sweeteners were used annually in the manufacture

^{5/} Competitive Relationships Between Sugar and Corn Sweeteners, by Phillip E. Jones and F. G. Thomason, Agricultural Information Bulletin No. 48, United States Department of Agriculture, June 1951.

TABLE 4.- INGREDIENTS OF SELECTED DAIRY PRODUCTS

	Product					
Ingredient	Ice	Water	Ice	Vegetable	Sweetened,	
	Cream	Sherbets	Ices	fat frozen	Unskimmed	
			Milk	desserts	condensed	
					milk in cans	
Percentages by weight of finished product 1/						
Sweeteners	15.0	28.0	30.0	14.5	15.0	42.0
Non-fat milk	10.0 to	3.0 to		12.0 to	10.0 to	
solids	11.5	4.0	-	14.0	11.5	20.0
Butterfat	10.0 to	1.0 to		4.0 to		
	12.0	2.0	-	6.0	-	8.5
Fats other						
than					6.0 to	
butterfats	-	-	-	-	8.0	-
Total sweet-						
eners,milk	35.0 to	32.0 to		30.5 to	31.0 to	
solids,and	38.5	34.0	30.0	34.5	34.5	
vegetable fats						70.5
Other 2/	65.0 to	68.0 to		69.5 to	69.0 to	
	61.5	66.0	70.0	65.5	65.5	29.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

1/ Formula of each of the products varies as to time and place but the one shown here is reported to be representative or average.

2/ Mostly water but also includes fruits, nuts, juices, flavorings, acids, and other ingredients, where used for the applicable product.

Source: Compiled from information supplied by International Association of Ice Cream Manufacturers.

TABLE 5. - SWEETENER CONTENT OF SELECTED DAIRY PRODUCTS

Product	Unit	Weight	Approximate sweetener content	
			pounds	Percent of Total Weight
Ice cream	1000 gallons	4800	720	15.0
Sherbets	1000 gallons	6500	1820	28.0
Water ices	1000 gallons	7400	2220	30.0
Ice milk	1000 gallons	6300	914	14.5
Vegetable fat frozen desserts	1000 gallons	4800	720	15.0
Sweetened unskimmed, condensed milk in cans	1000 pounds		420	42.0

Source: Compiled from information supplied by Agricultural Marketing Service (Formerly BAE), U. S. Department of Agriculture, and from data in Table 4.

TABLE 6.- APPROXIMATE QUANTITIES OF SWEETENERS USED IN SELECTED DAIRY PRODUCTS

Annually 1949-53

Year	Ice Cream	Sherbets	Water Ices	Ice Milk	Vegetable fat frozen desserts	Sub-total	Sweetened unskimmed condensed milk in cans	Total
Thousand Short Tons 1/								
1949	201	12	21	14		248	21	269
1950	200	15	20	17		252	13	265
1951	205	19	24	21		269	12	281
1952	213	23	30	24	4	294	11	305
1953	218	29	2/	2/	2/	2/	9	2/
Percent of Total								
1949	74.7	4.5	7.8	5.2		92.2	7.8	100.0
1950	75.5	5.7	7.5	6.4		95.1	4.9	100.0
1951	73.0	6.7	8.5	7.5		95.7	4.3	100.0
1952	69.7	7.6	9.9	7.9	1.3	96.4	3.6	100.0

1/ Corn sirup within Totals is on a dry basis; other sweeteners on basis used, with normal moisture content.

2/ Not available

Source: Computed from Tables 3 and 5.

of frozen desserts; 93 percent of the total went into ice cream and 7 percent into sherbets. During the war these relationships changed to 80 percent in ice cream, 17 percent in sherbets and 3 percent in ice milk. Despite the smaller proportion of total production accounted for by ice cream, the quantity of sweeteners used in ice cream making increased by one half. Total use of sweeteners in all frozen desserts averaged about 195,000 tons a year. Beginning in 1949, (after ice cream had temporarily regained its prewar share for about 3 years) and continuing to the present, an increasing part of the sweetener market in frozen desserts has usually been furnished by sherbets, water ices, and ice milk (Table 6). Despite these shifts, ice cream in 1952 was a market for about 72 percent of the 294 thousand tons of sweeteners used in frozen desserts.

Relationship of Sugar Costs to Total Costs ^{6/}

Throughout the war total costs to manufacturers of frozen desserts remained remarkably steady at the prewar average of about 87 cents per gallon. (Tables 7 and 8, and Figure 3). Increases of 25 percent in sugar costs and of 34 percent in costs of other materials were almost offset by reductions in processing, delivery and marketing costs. Since the war the picture has changed entirely. Although the cost of sugar and other materials have continued to rise, the principal change has been the increase in costs other than materials. Greater selling effort, and increased delivery and customers' service have been needed during the postwar period. Since 1945 sugar costs have increased 52 percent, other materials 56 percent and processing, marketing and administrative costs, 113 percent. Prior to the war, materials accounted for about 41 percent of total cost. During the war this figure climbed to 53 percent, reached a maximum of 63 percent in 1946 and 1947 and by 1952 had fallen to 49 percent.

The average cost to manufacturers of frozen desserts in 1952 was \$1.60 per gallon. Sugar costs amounted to 7.16 cents or about 4.5 percent. During the prewar period when total costs were 87 cents per gallon, sugar costs were 3.50 cents, or 4 percent of the total. At their highest level, 1945, they represented 5.3 percent.

The slightly increased importance of sugar costs results from increased use of sugar. During the prewar period an average of 0.75 pound of sugar was used per gallon of frozen desserts. By 1945 sugar use had increased to 0.85 pound per gallon and after declining in the earlier postwar years it was 0.83 pound in 1952. The quantity of sugar used per gallon has increased 11 percent since the prewar period. This increase is about the same as the change in the ratio of sugar costs to total costs. Thus the increase in sugar costs from 4.0 percent to 4.5 percent of total costs was due to increased use of sugar. Generally speaking, the rise in sugar prices has been about proportional with the increase in the total costs of producing frozen desserts.

With the present average sugar content per gallon, a 22 percent increase in sugar costs unaccompanied by other changes would increase total costs of frozen desserts by 1 percent.

Sweetened, unskimmed, condensed milk in cans

Production of sweetened, unskimmed, condensed milk in cans has declined since the close of World War I, except during and immediately after World War II, when military and export requirements resulted in a strong demand for the product.

Sweetened, unskimmed, condensed milk in cans is a more concentrated product than evaporated milk. It contains slightly more milk solids and, in addition,

^{6/} Although about 10 percent of the sweeteners in frozen desserts are other than sugar, for simplicity, this part of the analysis is prepared on the basis that only sugar is used. This in effect will slightly magnify the importance of sweetener costs.

FIG.3. COSTS TO MANUFACTURERS OF FROZEN DESSERTS

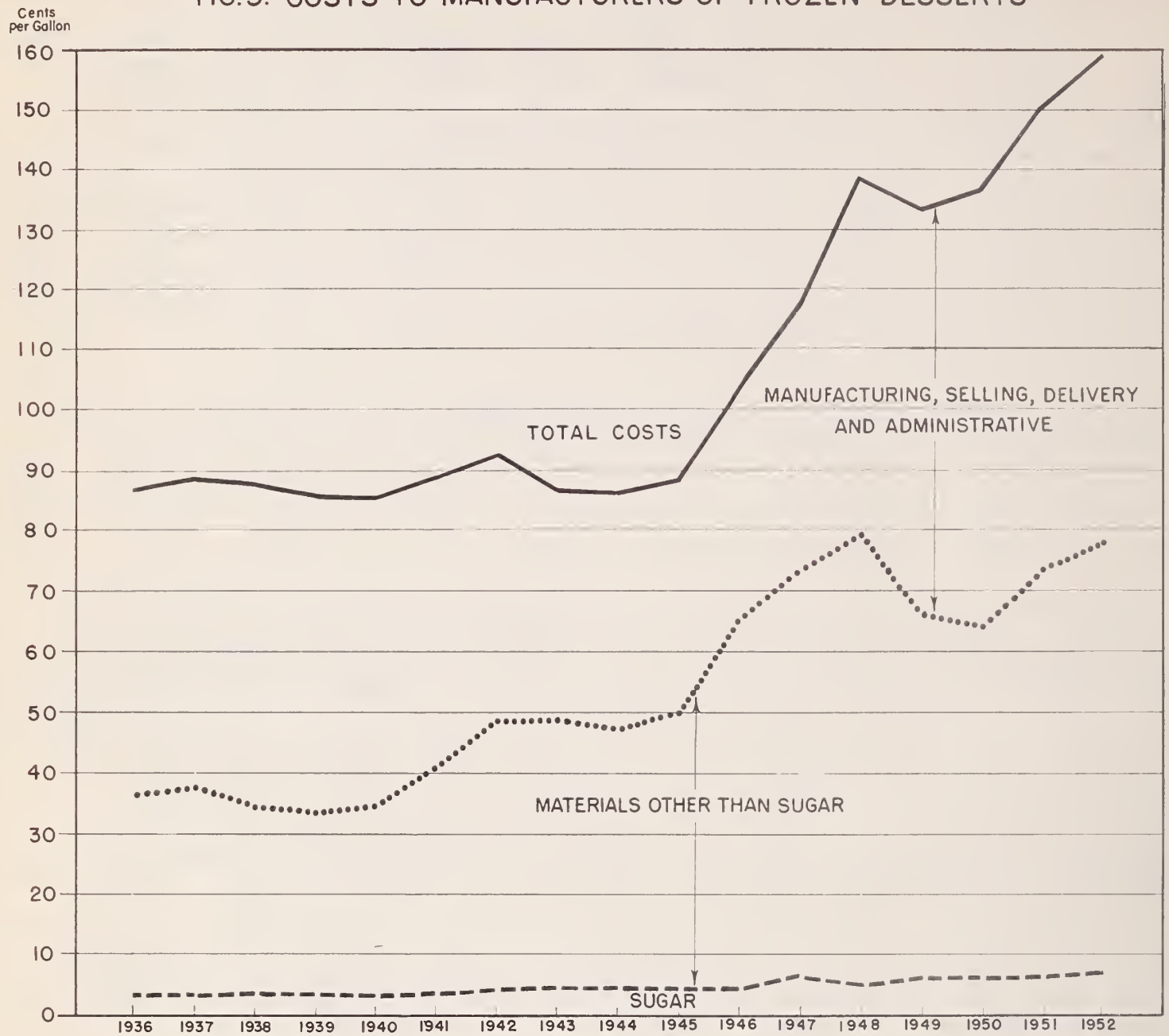


TABLE 7.- WHOLESALE PRICE OF SUGAR, SUGAR CONTENT AND VALUE PER GALLON OF FROZEN DESSERTS 1/

Specified Periods 1936-52 and Annually 1945-52

Period or Year	Sugar Price, Refined, Wholesale, N. Y., cents per pound 2/	Sugar content per gallon of frozen desserts, pounds per gallon	Value of sugar per gallon of frozen desserts, cents	Ratio value of sugar to total costs, percent
(1)	(2)	(3)	(4)	(5)
1936-40	4.66	0.750	3.50	4.03
1941-45	5.45	0.806	4.39	4.96
1946-48	7.51	0.744	5.59	4.65
1949-52	8.24	0.814	6.71	4.62
1945	5.50	0.854	4.70	5.32
1946	6.47	0.742	4.80	4.60
1947	8.29	0.742	6.15	5.24
1948	7.76	0.748	5.80	4.18
1949	7.97	0.799	6.37	4.76
1950	8.00	0.805	6.44	4.71
1951	8.38	0.817	6.85	4.55
1952	8.62	0.831	7.16	4.49

1/ For simplicity, sugar has been regarded as the only sweetener used although other sweeteners actually account for about 10 percent of the total.

2/ Frozen dessert manufacturers do not, of course, buy their sugar exactly at the New York wholesale refined cane sugar price quotation. However, the cost of sugar consumed in the "ice cream and ices" industry in 1947, as calculated from Census of Manufactures data, was 8.26 cents per pound, practically the same as the 8.29 cent average of the New York wholesale refined cane sugar price in 1947.

Source: Wholesale price (gross) refined cane sugar at N. Y., Lamborn Sugar Market Report. Sugar content per gallon of frozen desserts, computed from data in tables 3 and 5. Column (4) = column (2) multiplied by column (3) this table; column (5) = Column 4 divided by last column Table 8.

42 percent sweeteners. Its price is higher than the price of evaporated milk. Because of its high sugar content, an increase of 6.5 percent in the price of sugar would increase costs by an amount equal to 1 percent of the wholesale price of the product (Table 9). 7/ It appears that factors other than the price relationship to evaporated milk have been responsible for the long time decline in the demand for sweetened, unskimmed, condensed milk in cans for household consumption. Output of the canned product is relatively small as compared with that of evaporated milk, and with that of sweetened condensed milk in bulk (primarily skimmed) which is an important intermediate product in the manufacture of ice cream, confectionery, and bakery goods.

7/ Data on total manufacturers' costs are not available

TABLE 8. COSTS TO MANUFACTURERS OF FROZEN DESSERTS

Specified periods 1936-52 and annually 1945-52

Period: or Year :	Material			All Other Costs					Sub total	Total
	Sweeten- ers	Other	Sub- total	Manuf- actur- ing	De-		Ad- minis- tra- tive			
					Sell- ing 1/ 2/	livery 2/ 3/				
Cents per gallon (weighted average)										
1936-40	3.50	31.85	35.35	15.54	11.63	20.40	3.86	51.43	86.78	
1941-45	4.39	42.71	47.10	14.49	8.34	15.27	3.28	41.38	88.48	
1946-48	5.59	67.40	72.99	19.04	8.90	15.87	3.38	47.19	120.18	
1949-52	6.71	64.50	71.21	29.15	14.46	24.08	6.29	73.98	145.19	
1945	4.70	45.36	50.06	14.07	7.84	13.23	3.10	38.24	88.30	
1946	4.80	60.70	65.50	14.88	8.13	13.02	2.81	38.84	104.34	
1947	6.15	67.65	73.80	17.98	7.99	14.62	2.92	43.51	117.31	
1948	5.80	73.88	79.68	24.25	10.57	19.97	4.40	59.19	138.87	
1949	6.37	60.49	66.86	25.77	13.53	22.68	5.10	67.08	133.94	
1950	6.44	59.39	65.83	27.49	14.23	24.00	5.25	70.97	136.80	
1951	6.85	67.15	74.00	31.18	14.83	25.01	5.46	76.48	150.48	
1952	7.16	70.98	78.14	32.17	15.25	24.61	9.33	81.36	159.50	

Percentages of total

1936-40	4.0	36.7	40.7	17.9	13.4	23.5	4.5	59.3	100.0
1941-45	5.0	48.3	53.3	16.4	9.4	17.2	3.7	46.7	100.0
1946-48	4.7	56.1	60.8	15.8	7.4	13.2	2.8	39.2	100.0
1949-52	4.6	44.4	49.0	20.1	10.0	16.6	4.3	51.0	100.0
1945	5.3	51.4	56.7	15.9	8.9	15.0	3.5	43.3	100.0
1946	4.5	58.2	62.7	14.3	7.8	12.5	2.7	37.3	100.0
1947	5.2	57.7	62.9	15.3	6.8	12.5	2.5	37.1	100.0
1948	4.2	53.2	57.4	17.5	7.5	14.4	3.2	42.6	100.0
1949	4.8	45.2	50.0	19.2	10.1	16.9	3.8	50.0	100.0
1950	4.7	43.4	48.1	20.1	10.4	17.5	3.9	51.9	100.0
1951	4.6	44.6	49.2	20.7	9.9	16.6	3.6	50.8	100.0
1952	4.5	44.5	49.0	20.2	9.6	15.4	5.8	51.0	100.0

1/ Also includes advertising

2/ Also includes customers' service

Source: Compiled by permission from Special Bulletin No. 86, September, 1953, of the International Association of Ice Cream Manufacturers. Division of material costs between sweeteners and other materials computed in the Sugar Division, Commodity Stabilization Service, U. S. Department of Agriculture. For simplicity, sugar has been regarded as the only sweetener used although other sweeteners actually account for about 10% of the total.

TABLE 9

WHOLESALE PRICE OF SUGAR IN RELATION TO WHOLESALE
PRICE OF SWEETENED, UNSKIMMED, CONDENSED MILK IN CANS

Annually 1949-53

Year	Condensed milk dollars per case at N.Y.	Sugar price, refined, whole- sale, N.Y. cents per pound	Value of sugar required, dollars per case of con- densed milk	Ratio of value of sugar to price of con- densed milk, percent
(1)	(2)	(3)	(4)	(5)
1949	8.92	7.97	1.41	15.8
1950	9.04	8.00	1.41	15.6
1951	10.19	8.38	1.48	13.7
1952	10.80	8.62	1.52	14.1
1953	10.80 ^{1/}	8.72	1.54	14.3

^{1/} January through November

Source: Average wholesale price of known brands of sweetened, unskimmed condensed milk in 14-oz. cans, 48 cans to the case at New York. - Bureau of Labor Statistics, U.S. Department of Labor. Wholesale price (gross), refined, cane sugar at N.Y. - Lamborn Sugar Market Report. Column (4) = column (3) times applicable formulae in Table 4. Column (5) = Column (4) divided by column (2) this table.

SUGAR ACT OF 1948 -- ADMINISTRATIVE ACTIONS

<u>Date</u> <u>Announced</u>	<u>Administrative Actions</u>
December 9, 1953	Announcement of public hearing on January 6, 1954 in New Orleans, Louisiana, regarding allotment of 1954 quota for mainland cane sugar area.
December 9, 1953	Announcement of public hearing on January 18, 1954 in Chicago, Illinois, regarding allotment of 1954 quota for domestic beet sugar area.
December 14, 1953	Determination of total 1954 sugar quota requirements for continental U. S. of 8,000,000 short tons, raw value, and establishment of marketing or import quotas for various supplying areas. Total distribution of sugar in 1953 by primary distributors amounted to approximately 8,435,000 tons.
December 16, 1953	Establishment of 1954 sugar quotas for local consumption in Hawaii and Puerto Rico amounting to 40,000 and 100,000 short tons, raw value, respectively. Quotas for these areas for 1953 were 45,000 and 110,000 tons.
December 29, 1953	Establishment of preliminary marketing allotments of 1954 quota for mainland cane sugar area; these allotments to be effective until order can be issued on basis of record of hearing of January 6, 1954.
February 1, 1954	Announcement of public hearing on February 24, 1954 in Santurce, Puerto Rico regarding allotment of 1954 quotas for Puerto Rico.
February 1, 1954	Establishment of minimum wage rates for Puerto Rican sugarcane field workers in 1954. Wages are increased approximately 5 percent over 1953; at current sugar prices rates for sugarcane cutters will be about \$3.34 per eight-hour day as compared to \$3.16 in 1953.
February 1, 1954	Establishment of minimum wage rates for Virgin Islands sugarcane field workers in 1954. Wage rates continue unchanged from 1953 - ranging from 40 cents per hour for unclassified workers to 65 cents per hour for operators of mechanical loaders. The customary provision for perquisites is eliminated in view of rental charges for housing to be made by the Virgin Islands Corporation in accordance with applicable Federal laws and regulations.

STATISTICAL SERIES IN THIS ISSUE (Preliminary)HIGHLIGHTS

1. Deliveries of sugar by primary distributors for U. S. consumption in 1953, 8.5 million short tons, 5 percent larger than in 1952. Increase about equally divided between refiners and beet processors, approximately 190 thousand short tons each (Table 10).
2. Stocks of quota and over-quota sugar held by primary distributors December 31, 1952, up 72 thousand short tons, 4 percent, over same date in 1952. Stocks of mainland cane mills and of refiners increased, those of beet processors and importers declined (Tables 10 to 14).
3. Charges against quotas and offsets to drawback credits in 1953, 8.3 million short tons, 4 percent larger than in 1952. Quota charges exceeded adjusted quotas by about 190 thousand short tons because deficits were less than anticipated at time of proration. (Table 15). For discussion see "Market Review" in this issue.
4. Charges against quotas in January 1954, 471 thousand short tons, about 150 thousand less than same month in 1953. Large decreases occurred in receipts from Puerto Rico and the Philippines and no sugar from Hawaii was charged against January 1954 quotas. (Table 16).

TABLE 10. DISTRIBUTION OF SUGAR BY PRIMARY DISTRIBUTORS IN THE CONTINENTAL UNITED STATES, PUERTO RICO AND HAWAII DURING CALENDAR YEARS 1953 and 1952, AND STOCKS DECEMBER 31, 1953 AND 1952

	1953 (short tons, raw value)	1952
<u>DISTRIBUTION</u>		
<u>Continental United States</u>		
Refiners' raw sugar (Table 11)	1,829	2,833
Refiners' refined sugar (Table 12)	6,054,998	5,863,457
Beet sugar processors (Table 12)	1,751,642	1,559,505
Importers' direct-consumption sugar (Table 13)	579,847	583,455
Mainland cane mills direct-consumption sugar (Table 14)	125,086	123,793
Total	8,513,402	8,133,043
Deliveries for export	31,337	28,883
Total 1/	8,482,065	8,104,160
<u>Puerto Rico</u>	92,060	102,614
<u>Hawaii</u>	43,186	36,142
<u>STOCKS DECEMBER 31</u>		
Refiners' raw	187,941	190,883
Refiners' refined	217,064	199,694
Beet sugar processors	1,125,256	1,136,564
Importers' direct-consumption sugar	12,894	19,762
Mainland cane mills	149,964	74,295
Total	1,693,119	1,621,198

1/ Includes deliveries for United States military forces at home and abroad.

TABLE 11. RAW SUGAR: REFINERS' STOCKS, RECEIPTS, MELTINGS AND DELIVERIES
FOR DIRECT CONSUMPTION FOR JANUARY-DECEMBER 1953

(short tons, raw value)

Source of supply	: Stocks : Jan. 1, : 1953	: : Receipts :	: : Meltings :	: Deliveries : for direct : consumption	: Loss by : fire : etc.	: Stocks : Dec. 31, : 1953
Continental raws	47,464	500,113 1/	479,171	587		67,819
Cuba	41,126	2,455,520 2/	2,478,517	224		17,905
Hawaii	57,240	1,052,717 3/	1,050,896	20		59,041
Miscellaneous		94	94			
Other countries	2,650	79,299	81,412	25		512
Philippines	15,497	929,794	915,572	430	39	29,250
Puerto Rico	26,906	1,026,806 4/	1,039,755	543		13,414
Virgin Islands		12,257	12,257			
Total	190,883	6,056,600	6,057,674	1,829	39	187,941

1/ Includes 25,413 tons overquota sugar received under bond.

2/ Includes 38,919 tons overquota sugar, entered under bond, including that sugar entered for re-export but undelivered as of 12/31/53.

3/ Excludes 7,186 tons charged to quota on basis of preliminary entry.

4/ Includes 36,744 tons overquota sugar entered under bond.

Source: Compiled from reports submitted on Form SU-15A by sugar refiners.

TABLE 12. REFINED SUGAR: STOCKS, PRODUCTION AND DELIVERIES OF CANE AND
BEET SUGAR BY REFINERS AND PROCESSORS, JANUARY-DECEMBER 1953

(short tons, raw value)

	Refiners	Beet Processors
Stocks, January 1, 1954	199,694	1,136,564
Production	6,072,368	1,740,334
Deliveries	6,054,998	1,751,642
Stocks, December 31, 1953	217,064	1,125,256

Source: Compiled from reports submitted on Form SU-16A and SU-11C by cane refiners and beet sugar processors.

TABLE 13. IMPORTERS' STOCKS, RECEIPTS AND DELIVERIES OF DIRECT-CONSUMPTION SUGAR, JANUARY- DECEMBER 1953

Source of supply	: Stocks : : Jan 1, 1953 :	: Receipts : (short tons, raw value)	: Deliveries :	: Stocks : : December 31, 1953 :
Cuba	12,694	371,643 <u>1/</u>	381,557	2,780
Hawaii	2,652	30,278	30,736	2,194
Other countries	4,135	41,928 <u>2/</u>	38,465	7,598
Philippines		2,567	2,245	322
Puerto Rico	<u>281</u>	<u>126,563</u>	<u>126,844</u>	
Total	19,762	572,979	579,847	12,894

1/ Includes 1,729 overquota sugar in Customs' custody.

2/ Includes 5,967 overquota sugar in Customs' custody.

Source: Compiled from reports on Form SU-15B submitted by importers of direct-consumption sugar.

TABLE 14. MAINLAND CANE MILLS' STOCKS, PRODUCTION AND DELIVERIES, JANUARY-DECEMBER 1953

	short tons, raw value
Stocks, January 1, 1953	74,295
Production	634,846
Deliveries	559,177
For further processing	434,091 <u>1/</u>
For direct consumption	125,086
Stocks, December 31, 1953	149,964

1/ Includes 25,413 tons overquota sugar marketed under bond

Source: Compiled from reports submitted by mainland cane processors and processor-refiners.

TABLE 15. FINAL ADJUSTED QUOTAS AND PRELIMINARY QUOTA CHARGES, CALENDAR YEAR 1953.

Area or Country	Final adjusted quotas 1/	Credits for drawback of duty (short tons, raw value)	Charges to quotas and offsets to drawback credits	
			Total	Within direct-con- sumption limits for offshore areas
Domestic beet	1,620,000	0	1,751,642	
Mainland sugarcane	517,291	0	517,291	
Hawaii	1,088,382	0	1,087,096	29,638
Puerto Rico	1,117,351	0	1,115,945	125,765
Virgin Islands	12,415		12,250	0
Republic of Philippines	874,000	0	931,958	2,939
Cuba	2,759,281	7,085	2,766,411	375,743
Other foreign countries	111,280	4,048	115,038	35,700
Total	8,100,000	11,133	8,297,631	
Foreign countries other than Cuba and Republic of Philippines				
Dominican Republic	28,703	1,560	30,126	605
El Salvador	0 2/	0	0	0
Haiti	2,777	185	2,957	0
Mexico	11,901	616	12,517	12,439
Nicaragua	8,134	0	8,103	8,103
Peru	53,986	1,687	55,556	8,774
Countries without individual pro- rations	5,779	0	5,779 3/	5,779
Total	111,280	4,048	115,038	35,700
Liquid sugar (Wine gallons of 72 percent total sugar content)				
Cuba	7,970,558		8,004,817	8,004,817
Dominican Republic	830,894		808,106	808,106
British West Indies	300,000		0	0

1/ For domestic beet area and Republic of the Philippines statutory quotas less 180,000 tons and 100,000 tons deficits, respectively. Statutory quotas may be fully used regardless of deficits declared. Other adjusted quotas include prorations of these deficits.

2/ Initial proration 3,992 tons unused by 9/1/53 and prorated to others in this group.

3/ United Kingdom 1,033; Costa Rica, Netherlands, Panama and China 1,113 each; Belgium 29; Canada 265.

TABLE 16. STATUS OF 1954 SUGAR QUOTAS AS OF JANUARY 31, 1954

Area	Quotas	Credits for drawback of duty	Charges to quotas and offsets to drawback of duty (short tons, raw value)	Unfilled balances	
				Total	Within direct consumption limits for offshore areas
	(1)	(2)	(3)	(4)	(5)
Domestic beet	1,800,000		93,253	1,706,747	
Mainland sugarcane	500,000		57,135	442,865	
Hawaii	1,052,000			1,052,000	29,616
Puerto Rico	1,080,000		52,886	1,027,114	123,295
Virgin Islands	12,000			12,000	0
Philippines	974,000		18,421	955,579	59,662
Cuba	2,478,720	676	242,438	2,236,958	341,538
Other foreign countries	103,280	223	6,996	96,507	28,061
Total	8,000,000	899	471,129	7,529,770	
Foreign countries other than Cuba and Republic of Philippines					
Dominican Republic	25,647	84		25,731	
El Salvador	3,843			3,843	
Haiti	2,482	8		2,490	
Mexico	10,634	65	2	10,697	
Nicaragua	7,269			7,269	
Peru	48,241	66	1,830	46,477	
Countries with- out individual prorations ^{1/}	5,164		5,164	0	
Total	103,280	223	6,996	96,507	28,061 ^{2/}
Liquid sugar (Wine gallons of 72 percent total sugar content)					
Cuba	7,970,558		770,370	7,200,188	7,200,188
Dominican Republic	830,894		0	830,894	830,894
British West Indies	300,000		0	300,000	300,000

^{1/} Costa Rica 1,033; Netherlands 1,033; Panama 1,033; China 1,033; Belgium 40; Canada 992
^{2/} May be filled to extent of proration for specific country. See also Sec. 813.45 (b)(2) of S.R. 813.

